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# ALANIC BLUE SCHOOLS NETWORK

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## FOREWORD



#### Sofia Cordeiro AANCHOR PROJECT COORDINATOR

The All-Atlantic Blue Schools Network (AA-BSN) is a remarkable network implemented under the All-Atlantic Ocean Research and Innovation Alliance. It has really embraced the spirit of this science diplomacy process: **Connect, Act and Collaborate.** 

It started from an idea back in 2019 when several Ocean Literacy experts from along and across the Atlantic Ocean got together in scope of the AANChOR project, funded to implement the Belem Statement. It builds on the experience of the Blue School in Portugal and the AA-ORA Working Group on Ocean Literacy in scope of the Galway Statement.

With 16 Atlantic countries engaged (as of January 2023), 28 National coordinators from 18 institutions, 455 schools reached, 125 178 students and 3 458 teachers engaged it is truly an example of the desire of the All-Atlantic Ocean Literacy community to get together, to effectively act through a very specific collaboration opportunity and to impact tomorrow's generation! By connecting schools from Atlantic countries to raise and promote ocean literacy and society awareness AA-BSN is contributing to European, National and International strategies. The bottom-up process where each school builds its own project based on its socio-cultural-economic reality is, in my opinion, the basis for the success of AA-BSN.

And imagine... all that was possible in less than two years and with a pandemic period in between. AA-BSN is really an inspiring joint activity from the Atlantic Ocean Literacy community! Congratulation to all the team and those engaged. Well done!

## TIMELINE

### 2013

The European Union, United States and Canada signed a multilateral agreement called <u>Galway Statement</u> <u>on Atlantic Ocean Cooperation</u> to expand knowledge and collaboration efforts across the Atlantic Ocean. The Galway Statement motivated a science diplomacy endeavor aiming to "facilitate common research and knowledge exchange for us to provide a healthy, resilient ocean for our future generations", resulting in the <u>Atlantic Ocean</u> <u>Research Alliance</u> (AORA).



The **Blue Schools** concept emerged in Portugal in 2015 when Raquel Costa and her team had the chance to implement it in the country in 2017: a Blue School integrates ocean learning into the curriculum, recognizing the important role that formal education plays in fostering an ocean literate society. It promotes an interdisciplinary, inquiry, and project-based approach to both teaching and learning.

### 2017

As the Galway Statement was covering the North Atlantic Ocean, countries like Brazil and South Africa signed bilateral agreements with the European Union on science and technological cooperation, and further their collaborative efforts developed the Belem Statement on Atlantic Research and Innovation Cooperation. Many other bilateral agreements started to be signed between the European Union and other Atlantic countries, such as Argentina, Cape Verde and Morocco. With more countries joining efforts to enhance marine research cooperation along and across the Atlantic Ocean, the All-Atlantic Ocean Research and Innovation Alliance (AAORIA) was created to involve countries from all over the Atlantic Ocean to promote innovation, outcome-oriented ocean science, and an All-Atlantic community.

> AAORIA main initiatives: AORA <u>AANChOR</u> <u>All-Atlantic Projects</u> (or sister projects)



The AANChOR, or All-Atlantic Cooperation for Ocean Research and Innovation, supports the implementation of the Belem Statement and the AAORIA. AANChOR has three main objectives:

1. Identify concrete joint actions to support the implementation of the Belem Statement.

2. Contribute to the implementation of the selected joint actions.

3. Define long term measures for sustainability of the cooperation framework beyond the lifetime of the initiative.



Inspired by Blue Schools Portugal, the Maré de Ciência Program in Brazil launched the <u>Ocean in Education</u> <u>Challenge</u>, which had the participation of 71 educational spaces, with 130 educators working on Ocean Literacy with more than 2,000 students. At the same time, Argentina also started to structure its Blue School from the Science Cultural Center of the Ministry of Science, Technology and Innovation to start a pilot project in 2021.



First in-presence AA-BSN meeting during the Ocean Literacy Dialogues event in Santos, Brazil.

Signing of the All-Atlantic Declaration by the United States, Cape Verde, Morocco, Argentina, European Union, Brazil, South Africa, and Canada to reinforce and consolidate the implementation of the Galway and Belem Statement. The document states seven priority areas:

**Ocean and climate** 

Marine ecosystems and biodiversity

**Marine pollution** 

Sustainable fisheries and aquaculture

Atlantic ocean observing

Circular, sustainable and inclusive ocean economies

**Ocean literacy** 



Closing the first implementation phase of the AA-BSN, supported by AANChOR.



Launching of the United Nations Decade of Ocean Science for Sustainable Development (2021-2030).

Lauching of the All-Atlantic Blue Schools Network (AA-BSN) as one of the AANChOR's Joint Pilot Action.

### MESSAGE FROM AA-BSN COCOORDINATORS

Looking back to 2020, the All-Atlantic Blue Schools Network came as an ambitious project, as an anxiety and desire to join schools all over the Atlantic in a place where all were welcome to share their knowledge and point of view about the ocean, to promote exchange of experience about our common - but in so many ways different - ocean, to create and strengthen a Generation Ocean.

As with most international projects, between June 2021 and January 2023, the AA-BSN faced many challenges. Firstly, it started during the COVID-19 pandemics, when most schools were closed and forced to change their routine from night to day to an online mode. Secondly, language barrier - there were at least four different native languages (Portuguese, Spanish, French, and English) among the countries from the network. Thirdly, no funding to most of the countries to support their National Blue Schools program. An also the educational systems of each country/place were also a challenge. Without considering all the local challenges that each National Coordinator faced along the way, you may get to know a little bit about it in each chapter dedicated to each country of the network of this ebook.

Even so, as Raquel Costa says, Ocean Literacy is contagious. The AA-BSN enchanted her by the fact that "the Atlantic brought the countries together instead of pushing them apart. The multiculturalism that makes up this group, different life paths of each one, different backgrounds are incredible. I don't think I've ever learned so much from a group. The mutual learning was immense, the respect that arew as we shared the differences in strategies, obstacles and successes were fascinating. It united us with two things that I value a lot in life: the Ocean and the genuine desire to bring Ocean Literacy to the youngest effectively."

The trust and sense of group was built online, in between emails exchanged and virtual meetings (oh my, the time zones and different agendas), and during the Atlantic Challenges promoted. This trust was clear when the 16 AA-BSN National Coordinators had the chance to get to know each other in-person for the first time in October 2022 - for a full week of discussion and knowledge exchange to evaluate the program (the main results of this workshop you may find at the end of this ebook).

This trajectory of 18 months was quite a journey, not only to the AA-BSN, but to all of us involved, from National Coordinators to students, from researchers to teachers, local communities to ministries, Early Carrier Ocean Professionals (ECOPs) to fishers and indigenous people. Each stakeholder shared their ocean knowledge and experience, and believed they were making a difference in each others' life. And we all know it is just the beginning.



RAQUEL LORENZ COSTA Portugal



#### **RONALDO CHRISTOFOLETTI**

Brazil



GUADALUPE DÍAZ COSTANZO Argentina

## PORTUGAL

#### **NATIONAL LANGUAGE**

Portuguese

#### POPULATION

10,343,066 inhabitants

#### TERRITORY

92,212 km²

#### **CURIOSITY**

The city of Nazaré is known for its giant waves and the biggest wave surfed was 26.21 meters high!

#### NATIONAL COORDINATOR

Raquel Costa

#### **COORDINATION TEAM**

Patricia Conceição Fernanda Silva

#### INSTITUTION

Ministry of Economy and the Sea of Portugal

#### PARTNERS

- Associação Portuguesa de Lixo Marinho
- Associação portuguesa de educação ambiental
- Aporvela
- Lab. Arqueologia Conservação do Património Subaquático - I. P. Tomar
- Mare
- Sailors for the Sea Portugal

- ANP-WWF
- Zoomarine Algarve
- Estrutura de Missão para a Extensão da Plataforma Continental
- Jardim Zoológico
- LifeResc Escola de Socorrismo e Sobrevivência
- IPMA
- Docapesca
- Museu do Mar Rei D. Carlos
- CIIMAR
- Centro Ciência Viva de Tavira
- Instituto da Conservação e Florestas
- Centro Ciência Viva do Algarve
- Centro Ciência Viva de Lagos
- Oceanário de Lisboa
- Vertigem Azul
- Miracle Horizon Lisboat
- Francescio Lufinha
- Odisseia Viva
- Resgate Associação Nadadores Salvadores do Litoral Alentejano
- CIEMAR
- Museu Marítimo de Ílhavo
- Surfing Life Club
- Laboratório Nacional de Engenharia
- FOR-MAR
- Clube Naval de Sesimbra
- Direção Regional das Pescas

- Centro de Ciência de Angra do Heroísmo
- EducaSom
- Instituto de Sistemas e Robótica / IST
- Vertente Natural
- GNR Destacamento Territorial da Horta
- Sharks Educational Institute
- Centro de Mar de Viana do Castelo
- Centro de educação ambiental de Viana do Castelo
- Odisseia Imersiva
- Nazaré Marés de Maio
- CerCiência
- GEOTA
- Oeiras Viva
- OstraSelect
- ExpoLab
- SoproMar
- WeDive
- Nazaré On\_da Wave
- Ass. Nadadores Salvadores da Nazaré
- EcoAlga
- Zero em Comportamento
- Zoo de Lagos
- FlagranteTítulo
- AlgaPlus
- Porto de Lisboa
- Observatório do Mar dos Açores
- Porto de Aveiro
- Porto da Figueira da Foz
- Sociedade portuguesa de aves marinhas
- Aquário Vasco da Gama
- Planetário
- Clube Intercultural Europeu
- Fragata D. Fernando II e Glória
- Museu de Marinha
- Universidade dos Valores
- Quando + 1 é = 1
- Clube de Vela de Lagos
- Laredo
- Just Dive
- 19 Project
- Aventuras da Mia
- Marina de Lagos

- CESAM
- Ocean Devotion
- Wavec
- Programa Tatô
- Mar de Experiências
- AECO
- Observatório Oceanivo da Madeira
- Missão Dimix
- Águas do Tejo Atlântico
- Trato Lixo
- Discover Tours
- LIPOR
- CoLAB +ATLANTIC
- ANCORAS
- Águas do Algarve
- Filipa Leandro
- Sciaena
- Direção Regional do Mar
- Sea Things
- Olho.te
- ILHAPEIXE
- VMG Madeira
- HIDROVAL
- Troiacruze
- Observatório do Litoral Norte
- Luciana Vampré di Monte
- Delta Cafés
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- Leroy Merlin
- Desporto Escolar
- CIBIO
- Liga Portuguesa para a Natureza

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# PORTUGAL







TEACHERS



PARTNERS

(By January 2023)









### BLUE SCHOOLS IN PORTUGAL

As the first country where the Blue School concept was created and implemented, Portugal has the longest history of experience and learning to share among the AA-BSN. Portugal is contributing to effectively increasing the visibility of the ocean and Ocean Literacy in their school community, showing a steady growth of schools adhesion to the program in their country - an evidence of its methodology efficiency - and seeing attitudinal changes towards the ocean across all stakeholders and increasing knowledge, awareness and positive attitudes towards the ocean.

The primary aim of the Blue School Portugal was to promote Ocean Literacy within the formal education sector. The program was designed to overcome identified obstacles, establish sustained engagement with schools, and bring together several entities making significant contributions to Ocean Literacy in educational settings: connecting ocean professionals to students as a way to give concreteness to the most abstract themes of the ocean; offering diversified hands-on activities conducted by partners; connecting schools and stakeholders; and offering spaces and moments to schools and students share experience and knowledge about their Ocean Literacy learnings.

Over the years, the Blue School program

has had a significant impact on teachers and students alike. This rewarding journey has led to UNESCO recognizing Blue Schools Portugal as a successful case of an Ocean Literacy approach, contributing to the implementation of the United Nations Decade of Ocean Science for Sustainable Development.

"Blue Schools has been part of Raquel Costa's life since 2015, when she started to create the concept with her team. She says that after 8 years of dedicated work. there are a diverse number of partners, schools, teachers and students around the country making part of the Blue Schools Portugal. Inspiring many other countries and schools across the globe, Blue Schools Portugal is an example of how challenges may be seen as opportunities to build an Ocean Literacy community of practice."

Officially initiated in 2017 as an educational program of the Ministry of Economy and Sea, the program aimed to create an Ocean Literacy community that included schools, partners, municipalities, and local stakeholders, inspiring a collective wave of citizenship and ocean awareness in the country, and further to other parts of the Atlantic.

The concept and requirements of Blue School Portugal were developed in accordance with multiperspective approach of Ocean Literacy and following the guidelines of the National Strategy for the Sea, National Strategy for Citizenship Education, and Profile of Students Leaving Compulsory Schooling. International educational recommendations from organizations such as the European Commission, the Organization for Economic Co-operation and Development (OECD), and the United Nations were also taken into consideration, particularly those related to the Sustainable Development Goals 4 (Quality Education), 14 (Life Below Water), and 17 (Partnerships).

To ensure the sustainability and scalability of the Blue Schools program in Portugal, political support is essential to embed the program into a national scope and obtain recognition from the Ministry of Education. Further investment and the allocation of human resources are also important to keep the community engaged in a consistent schedule of activities. To improve Ocean Literacy dimensions such as knowledge transfer and awareness, Blue Schools are working to involve families and local entities, ensuring that the community remains committed to discovering the ocean within and beyond the schools.



### BRAZIL

#### NATIONAL LANGUAGE

Portuguese

#### POPULATION

216,544,150 inhabitants

#### TERRITORY

8,515,000 km<sup>2</sup>

#### **CURIOSITY**

The only Atoll in the South Atlantic is found in Brazil, 144 nautical miles from the city of Natal in Rio Grande do Norte and has been a marine protected area since 1979.

#### NATIONAL COORDINATOR

Ronaldo Christofoletti

#### **COORDINATION TEAM**

Fernando Martins Camila Keiko Takahashi

#### INSTITUTION

Universidade Federal de São Paulo (UNIFESP)

#### PARTNERS

- Ministry of Science, Technology and Innovation of Brazil
- British Council
- UNESCO



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### BRAZIL

### 42 SCHOOLS



#### STUDENTS



**TEACHERS** 

3

#### PARTNERS

(By January 2023)

### BLUE SCHOOLS IN BRAZIL

The Blue School Program in Brazil promotes important discussions on Ocean Literacy and awareness in the country. It has been an opportunity for schools and educational stakeholders to understand their roles in supporting Ocean Literacy. By finding themselves in this process, the stakeholders are able to adjust their activities and practices to respond to the ocean sustainability agenda. This happens at the same time as a network of institutions and individuals is being engaged and mobilized to value the actions and projects underway in Brazil that help schools to be blue.

"In the Brazilian experience, the schools involved realized that they can support the fulfillment of the goals and commitments of the UN Ocean Decade. In doing so, they are active participants in creating blue minds and raising the Generation Ocean."

Brazil is a large country. There are several regional differences and all the different cultures, realities and territories make the Blue School Program more diverse and naturally adaptable. This is a valuable resource for Brazilian schools, which are encouraged to implement a blue curriculum that makes sense for their different contexts. Led by Maré de Ciência, an extension program from the Federal University of São Paulo (UNIFESP) in partnership with the Brazilian Ministry of Science, Technology and Innovation, and support from UNESCO and British Council, the main role of the Blue School team in Brazil is to provide knowledge and tools so that educators feel that the ocean is already part of their work and their school. Valuing what they already do is also a strategy to support autonomous behavior and openness to creativity in carrying out activities related to the ocean.

With a project called Desafio Oceano na Educação, Maré de Ciência invited schools across the country to work the ocean theme in their school curriculum, respecting and valuing their local characteristics. When the Covid19 pandemic struck, the planned activities were quickly adapted to a new virtual context. The result was surprising: more than 2,000 students and 130 educators from 71 educational institutions were engaged in inter and transdisciplinary projects about the ocean.

More than having a blue seal, when Brazilian Blue Schools realized the potential they have in using the network to exchange experiences with other countries and realities, it is possible to see remarkable results. Even when the language barrier is a challenge, the schools are always willing to make the conversation happen, as dialogue is the most powerful tool the Blue Schools Program has. These conversations are helping to transform the way young students experience the ocean in their lives: the ocean brings them together and helps them as part of something bigger.

Inspired by the results of the Blue Schools in Brazil, several municipalities have developed Ocean Literacy Laws, public policies that ensure that the education system will embrace Ocean Literacy approaches. Step by step, the Blue Schools are growing from within Brazil, creating a long-term project towards the national educational system.

The future of Blue Schools in Brazil is a path of growth. A new frontier is to reach schools in all coastal regions, riverside areas, and indigenous territories in the country. This Program can indeed become a natural process for students, schools and stakeholders and can involve policy and decision makers to support education systems to enrich a bluer generational change.

## ARGENTINA

#### **NATIONAL LANGUAGE**

Spanish

#### POPULATION

47,327,407 inhabitants

#### TERRITORY

2,780,000 km<sup>2</sup>

#### **CURIOSITY**

Peninsula de Valdes, in the Atlantic Ocean in Chubut Province, has around 3,625 km<sup>2</sup> (1,400 sq mi) in size and is an amazing nature reserve listed as a World Heritage Site by UNESCO in 1999. At this place, it is possible to see a stable population of Ballena Franca Austral (*Eubalaena australis*) during breeding season, an unforgettable experience.

#### **NATIONAL COORDINATOR**

Guadalupe Díaz Constanzo

#### **COORDINATION TEAM**

Julieta Molinas Gabriel Mendez Avila Ana Carolina Zelman

#### INSTITUTION

Centro Cultural de la Ciencia | Ministerio de Ciencia, Tecnología e Innovación



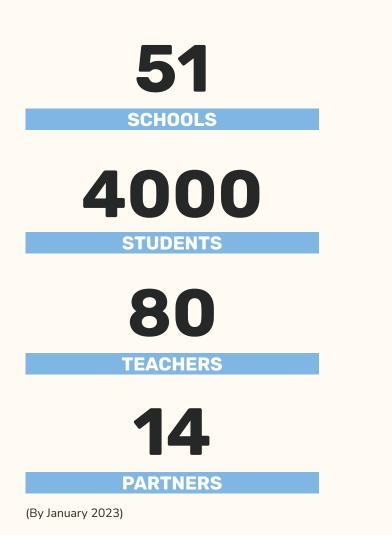
#### PARTNERS

- Universidad de Buenos Aires
- Universidad de Jose C. Paz
- Universidad Nacional de la Patagonia San Juan Bosco
- Universidad de Tierra del Fuego
- CADIC
- CENPAT
- CNEA
- INIDEP
- CNEA
- Municipalidad de Comodoro Rivadavia
- MAGYP
- MINCYT
- Pampa Azul Initiative
- Instituto de Conservación de Ballenas

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### ARGENTINA







### **BLUE SCHOOLS IN ARGENTINA**

Over two years of implementation, Blue Schools in Argentina have validated the importance of creating bonds between schools within the country. Investing in the strengthening of these linkages and providing feedback on various projects has been crucial to engaging the educational system. Schools are very enthusiastic about their blue projects. Highlighting ocean matters and connecting schools with experts had also fostered creative ideas towards a collaborative framework for each school's initiative.

"There are several ongoing initiatives in the country that can support ocean-oriented learning. Even schools located far from the ocean have discovered that they can develop meaningful relationships that positively impact ocean care. The potential for expansion and involvement of multiple stakeholders has been evident in the program's success."

The program has been emphasizing the need for collaboration, even between distant schools. This approach can help to create powerful Ocean Literacy messages and solidify the program's identity. To maintain and expand the program's success, it is essential to formalize engagement with the political authorities and other partners, improve monitoring tools, develop materials in Spanish and provide funding for a steady and robust plan of activities.

The Blue Schools program in Argentina is developed by Centro Cultural de la Ciencia (C3) - an institution linked to the Argentinian Ministry of Science, Technology and Innovation - and has been successful in engaging citizens across the country in issues about the ocean and improving their connection to it. With nearly 4,000 students, 100 teachers, and representation from more than half of Argentina's provinces, this program is the first Ocean Literacy approach of its kind in the country.

The Argentinian network of schools is committed to spreading their blue learning acting local and also spreading to the Atlantic community.



### UNITED STATES OF AMERICA

#### **NATIONAL LANGUAGE**

English

#### POPULATION

332,403,650 inhabitants

#### TERRITORY

9,629,091 km<sup>2</sup>

#### **CURIOSITY**

The United States has over 95,000 miles of coastline!

#### NATIONAL COORDINATOR

Meghan Marrero

#### INSTITUTION

Mercy College and National Marine Educators Association

#### PARTNERS

- NOAA
- National Marine Educators Association
- Mercy College

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400 STUDENTS

18

#### **TEACHERS**



#### PARTNERS

(By January 2023)

### **BLUE SCHOOLS IN THE USA**

Since the launch of the Blue School Program in the USA, several schools have shown a strong interest in connecting with the global ocean. The participating students and teachers are committed to learning more about marine sciences and raising awareness of critical issues such as runoff and plastic pollution.

For example, students have participated in webinars with scientists to learn more about marine habitats and how humans are impacting our global ocean. Schools have participated in stewardship activities including stenciling storm drains and community beach cleanups.

The students enrolled in the Blue School Program are passionate, creative, and eager to bring about change. The program's activities inspire the next generation by opening a window to a seascape of ideas for ocean conservation. Schools are also motivated to connect with each other, both nationally and internationally, encouraging collaboration and the design of integrated action projects. Sharing lessons learned with other countries can be beneficial, as hearing about the different strategies and entry points that diverse nations use to connect schools to their waterways.

The Ocean Literacy movement originated in the United States of America a few de-

cades ago, with the objective of ensuring that students learn about the ocean while in school. The National Marine Educators Association (NMEA) has a long history of efforts on Ocean Literacy construction, since developing its concept with national and international partners up to creating a series of materials specific to each school curriculum and hosting events to evaluate and discuss Ocean Literacy around the globe.

#### "NMEA and USA Blue Schools make ideal partners. Together we can support teachers and students as they make positive impacts on the ocean."

In 2022, the Blue School Program in the USA focused on schools near the Atlantic Ocean. However, in such a vast country, the program aims to engage with schools across all national states and territories to create a large-scale impact and raise awareness about the importance of the ocean. Engaging policymakers will aid the program's future upscaling and reinforce the significance of ocean learning in educational, coastal, and public policy. Ocean Literacy can play a vital role in shaping these policies going forward.



#### NATIONAL LANGUAGES

**English and French** 

#### POPULATION

38,614,963 inhabitants

#### TERRITORY

9,985,000 km<sup>2</sup>

#### **CURIOSITY**

Canada has the longest coastline of any country in the world, measuring 243,042 km (includes the mainland coast and the coasts of offshore islands).

#### NATIONAL COORDINATOR

Diz Glithero

#### **COORDINATION TEAM**

Janice Williams Meg Callon

#### INSTITUTION

Canadian Ocean Literacy Coalition



#### PARTNERS

- Canadian Commission for UNESCO Schools Network
- Canadian Network for Ocean Education
   (CaNOE)
- Canadian Geographic Education
- ECOP Canada
- Exploring by the Seat of Your Pants
- Ocean Networks Canada
- Ocean School (National Film Board of Canada & Dalhousie University)
- M-Expertise Marine
- Water Rangers

#### **CONTACT AND LINKS**

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### CANADA

FOCUS IN PILOT YEAR WAS ON EDUCATOR AND STUDENT ENGAGEMENT IN EVENTS AND LEARNING EXPERIENCES, NOT ON SCHOOL REGISTRATION

#### SCHOOLS

#### **OVER**



#### **STUDENTS**

OVER



TEACHERS

10

#### PARTNERS

(By January 2023)







### **BLUE SCHOOLS IN CANADA**

In Canada, a "Blue School" is any school community that engages in purposefully planned experiential learning about marine, freshwater, and coastal areas. Engagement and training opportunities for schools, formal and non-formal educators, and students from elementary to higher education were a priority for the development of the initial pilot phase (August 2021 to January 2023) of the Blue Schools Canada program. There was also an important focus on designing innovative and immersive resources and activities to support the development of a collaborative framework for schools to join the program.

Some of these inspiring resources included students being able to walk on a giant ocean floor map (11m x 8m) of Canada's freshwater systems, watersheds, oceanic waters, and sea ice. Students could use an augmented reality app to build connections with marine protected areas, biodiversity of species, different voices leading ocean conservation efforts in Canada, and other geographic and cultural features. 20 giant floor maps have been made freely available and are traveling the country, being used by schools, educational conferences, museums, science centers, libraries, and public festivals. More than 75,000 students dove into this experience in 2022.

Beyond the giant ocean floor map pro-

gram, the role of community storytellcross-cultural understanding of Indigenous Protected and Conserved Areas. The Canadian Ocean Literacy Coalition (COLC) collaborated with the Indigenous Leadership Initiative to create a sual content is a powerful tool to create learning opportunities in classrooms and other public spaces across Canada and hub' in 2022, bringing together innovaeducation organizations across Canada. 2022 enabling early career ocean profestheir expertise with schools and other and interactive exchanges of experiences reached over 3,000 students from classrooms across Canada and an additional 1,000+ from eight other countries.

Building on this momentum, COLC, together with 10 partner organizations, launched the Ocean Festival Schools Day as part of the International Marine Protected Areas Congress (IMPAC5) in early 2023 in Vancouver, Canada. More than 300 students from 7 different Metro Vancouver schools participated in Schools Day which served as the kick off to a weekend-long public festival at which more than 10,000 people attended. The momentum from the IMPAC5 Ocean Festival and the recognition of Ocean Literacy as a transformative tool to inspire ocean conservation action and behaviour change continues to flow into **Ocean Week Canada** - an annual public celebration of the ocean each June.

Diz Glithero highlights that members of the All-Atlantic Blue School Network in Canada are benefiting from this cross-cultural collaboration as we share, learn, and connect with Blue Schools from other countries. This exchange enriches educational experiences and helps to foster global citizenship. There is no one way to learn about the ocean, nor is there one single approach to protecting it. We need to value, support, and learn from each country's educational pathways, experiences, and people.

The All-Atlantic Blue School Network has created an overarching framework to help connect various Canadian ocean education efforts to a broader Ocean Literacy global movement. Since its beginning in 2021, Blue Schools Canada is creating important opportunities for cross-cultural collaboration, knowledge sharing, and peer networking. Coordinated by the Canadian Ocean Literacy Coalition, the program's implementation team involves representatives from national and regional education NGOs, ocean enthusiast teachers, marine social scientists, and ocean science outreach leaders at Canadian universities and in the Government of Canada.

The effort of the All-Atlantic Blue School Network coordination in leading the process and contributing to making each country feel part of the Atlantic community has been fundamental for Canada's involvement in the process. Although strengthening ocean education is one of the priority action streams in Canada's National Ocean Literacy Strategy, the opportunity to connect national efforts to a broader global initiative is appealing. In turn, Blue Schools provides an opportunity to transform learning by making meaningful connections *within and between* ocean and climate education, education for sustainable development, global citizenship, and Indigenous education at the school district, Ministries of Education, and international levels.

The growth of the Blue Schools initiative in Canada requires strategic partnerships and alignment with existing networks. Building upon and working together with successful environmental and climate learning initiatives helps make ocean learning more interdisciplinary, experiential, investigative, and community-oriented. Tracking progress, adapting programming, securing funding, and building broad institutional support for a strong, diverse, and responsive coordination team will enable continued growth of more students, educators, and communities in this national blue learning movement.

### ANGOLA

#### NATIONAL LANGUAGE

Portuguese

#### POPULATION

35,566,313 inhabitants

#### TERRITORY

1,246,700 km<sup>2</sup>

#### **CURIOSITY**

Angola is a marine biodiversity hotspot because it is located at the junction of two African Large Marine Ecosystems – the Guinea Current and the Benguela Current.

#### NATIONAL COORDINATOR

Carmen Ivelize Van-Dúnem do Sacramento Neto dos Santos

#### **COORDINATION TEAM**

Cremilda Domingos Daniel Chitata Nelson Baião Gil Cumena Jesus Canha

#### INSTITUTION

Universidade do Namibe



#### PARTNERS

- UNESCO Angola
- Complexo escolar Helder Neto
- Universidade do Namibe
- Administração municipal de Moçâmedes
- 2M Produções
- Ministry of Fisheries

#### **CONTACT AND LINKS**

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### ANGOLA 3 SCHOOLS 155 STUDENTS 14 **TEACHERS** 5 PARTNERS (By January 2023)







### BLUE SCHOOLS IN ANGOLA

Prior to the Blue School Program, schools in Angola did not have any educational activities focused on marine conservation. The perception of appreciation and care for the ocean is a visible result in the school community involved in the program. The change in behavior, the connection with environmental education, and the maintenance of ecosystems for future generations became part of the conversations between students and teachers within and beyond classrooms. Everyone is committed to meeting the marine ecosystem and social demands.

Blue Schools in Angola are being created based on an analysis of the national education system's laws. By assessing the contents of different disciplines, it was possible to identify links related to ecosystem preservation. Thus, the schools involved in the program were encouraged to understand and develop the Blue School concept that made sense for them. This investigation helped identify that schools have great potential to balance theory and practice while recognizing their responsibility to care for the ocean.

The future for schools in Angola includes interactive lenses to contribute to local sustainable development. Even schools in the middle of the continent can play a role in activities that value marine sciences. Blue Schools can be internationalized, recognized, and capable of connecting the whole world, as the imagination of the ocean becomes increasingly present in classrooms. Schools have the potential to be self-sufficient, with teachers who are able to synthesize their contents, combining theory and practice.

The program in Angola is supported by the Minister of Fisheries, who is the project coordinator, UNESCO Angola, and the administration of the Municipality of Moçâmedes. With more funding, publicity, and human resources, the program is destined to move forward and grow. The Blue Schools are Angola's regional and global commitment. It will be important that the AA-BSN showcases initiatives developed by all countries to encourage the Atlantic community to get involved.

The Ocean Literacy approach has created a deep involvement of the school community with marine resources and environments. This has been a learning process and an assimilation of collective commitment. The initiatives developed under the Blue School Program in Angola are seen as a legacy for ocean education and conservation. Once an educational base is built, future generations can fulfill and continue the activities developed.

### CAPE VERDE

#### NATIONAL LANGUAGE

Portuguese

#### POPULATION

593,140 inhabitants

#### TERRITORY

4,033 km²

#### NATIONAL COORDINATOR

João do Monte Duarte

#### **COORDINATION TEAM**

Yara Rodrigues Felisberto Moreira

#### INSTITUTION

Universidade Técnica do Atlântico

#### PARTNERS

- Organização para o Desenvolvimento Integral das Famílias (ODIF)
- Camões Instituto da Cooperação e da Língua Portuguesa
- ENAPOR Portos de Cabo Verde

#### **CONTACT AND LINKS**

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SCHOOLS



STUDENTS



**TEACHERS** 



(By January 2023)

### **BLUE SCHOOLS IN CAPE VERDE**

In 2021, the Blue Schools Program was launched in Cape Verde, initially targeting three schools in need of resources and knowledge about their environment. Despite the challenges faced in managing financial and human resources, the program has been an enlightening journey of discovery.

Each year, during a weeklong event in November, Cape Verde celebrates the ocean, providing an essential platform for the Blue Schools to showcase their impactful achievements and contributions to society. With their projects on plastic pollution and biodiversity conservation, creatively presented through art, poetry, and music, the Blue Schools have captivated policymakers and the public.

Engagement from various stakeholders, such as the Ministry of Education and the Ministry of the Sea, is welcome to implement and expand the Blue Schools program in Cape Verde. The government's endorsement of the program through a signed memorandum in 2022 is an encouraging step towards engaging more partners to contribute to the development of new ideas and activities to invest in the Blue Schools, ensuring a brilliant blue future for Cape Verde.

"Cape Verde recognizes the immense potential of the Blue School concept in promoting critical thinking and sustainability among students by integrating ocean-related topics into the educational experience."







### SAO TOME AND PRINCIPE

#### **NATIONAL LANGUAGE**

Portuguese

POPULATION

229,911 inhabitants

TERRITORY

963,5 km<sup>2</sup>

#### **NATIONAL COORDINATOR**

Sónia Pessoa

#### INSTITUTION

Missão Dimix

#### **CONTACT AND LINKS**

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STUDENTS



**TEACHERS** 

(By January 2023)



### BLUE SCHOOLS IN SAO TOME AND PRINCIPE

The Blue School Program Sao Tome and Principe aims to address the economic and social challenges of local communities, which directly affect the education of children. The program values the innate curiosity and learning potential of students and can create job opportunities and income for the community, while also fostering a strong bond with the ocean. The new generation can become young leaders capable of embracing the significant challenge of integrating the ocean sustainability agenda with their daily socioeconomic struggles.

"The beauty of marine life in its ecosystem has immense power, especially for children who witness fish "pecking" at debris at the bottom of the sea. These moments instill in them the urgency to act to protect and conserve the ocean and life on Earth."

Missão Dimix is a non-governamental organization founded in 2016 by Sónia Pessoa and her friends who shared a passion for creating a project that promotes education and community development in Sao Tome and Principe. They believe in the power of education and strive for the harmonious coexistence of people, animals, and the environment, while respecting local culture and practices.

The organization launched the Sao Tome and Principe Blue School Program, inspired by the Blue School Portugal, to promote interaction with the ocean and surrounding communities. Despite receiving little support from other institutions, Missão Dimix worked hard at the Praia-rei school in Roça de Água-Izé to give children opportunities to connect with the sea.

Missão Dimix hopes to receive more support from institutions to expand the Blue School Program, so more students can experience Ocean Literacy and bring more art and joy into their lives. By appreciating the beauty of Sao Tome and Principe's island and promoting sustainability can make schools bluer and improve the lives of the community.

### MOROCCO

#### **NATIONAL LANGUAGE**

Arabic Berber

#### POPULATION

38,064,721 inhabitants

#### TERRITORY

710,850 km<sup>2</sup>

#### **CURIOSITY**

Along Morocco's Atlantic coast, several lagoons, such as Moulay Bouselham, Oualidia, Sidi Moussa and Khnifis, have great ecological value and provide a wide variety of ecosystem services. These lagoons attract many tourists every year.

#### NATIONAL COORDINATOR

Khalid El Khalidi

#### **COORDINATION TEAM**

Mohammed Hadani Ahmed Younes Laaziz Ahmed Raissouni Abdenaim Minoubi Malika Essaten Othmane Boualla

#### INSTITUTION

Faculty of sciences, University of Chouaib Doukkali



#### PARTNERS

- University of Chouaib Doukkali
- University of Ibn Zohr
- University of Abdelmalek Essaadi
- Direction provincial of El Jadida of the Ministry of National Education, Preschool and Sports
- Higher Normal School of Rabat
- Higher Normal School of Marrakech
- French International School Jean Charcot
- Groupe Scolaire Ouled Zid

#### **CONTACT AND LINKS**

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www.youtube.com/watch?v=eaD2 EofpPJ0

# MOROCCO



# 148

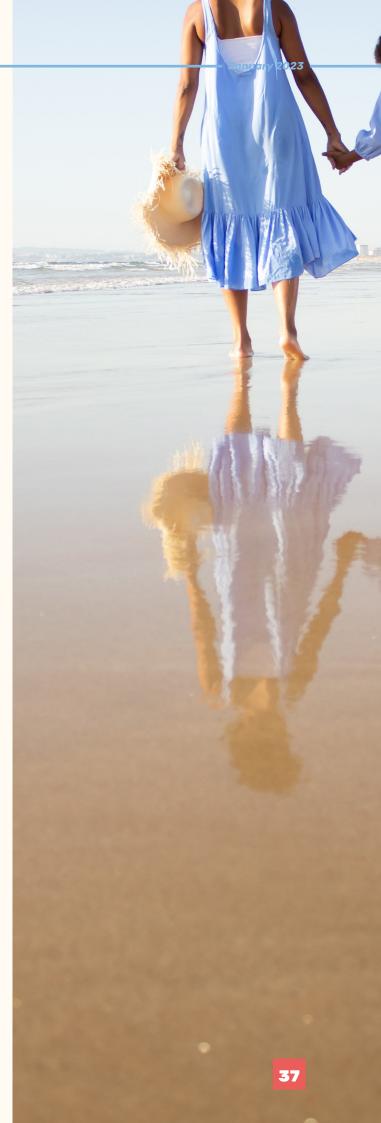
STUDENTS

10

TEACHERS

(By January 2023)





### BLUE SCHOOLS IN MOROCCO

The Blue Schools Network presents a unique opportunity for Morocco to promote ocean learning. Since joining the program in 2021, Morocco has been actively involved in providing inspiring Ocean Literacy initiatives to its education system.

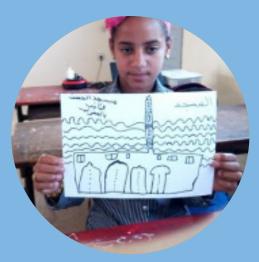
As the Blue Schools Program continues to be implemented in Moroccan schools, it is crucial to recognize the need for new educational resources to enhance students' knowledge of the ocean. As tomorrow's decision-makers, they must be equipped with the tools to comprehend life on earth and climate change.

"Prior to their involvement in the Blue Schools Program, Moroccan students had a limited understanding of the ocean. However, through the program's activities, they have gained a deeper appreciation for the various dimensions of the ocean's natural environment. By exploring the mysteries of the sea, they have learned the importance of protecting this environment and utilizing its resources sustainably."

Despite the efforts of teachers and volunteers to promote the Blue Schools Program, there are still limitations. To expand the initiative and encourage behavior change towards a harmonious relationship with the ocean, the involvement of schools, partners, sponsors, the government, and students across the country is essential.







### SOUTH AFRICA

#### **NATIONAL LANGUAGES**

Sepedi Sesotho Setswana siSwati Tshivenda Xitsonga Afrikaans English isiNdebele isiXhosa isiZulu

#### POPULATION

61,281,481 inhabitants

#### TERRITORY

1,220,000 km<sup>2</sup>

#### NATIONAL COORDINATOR

Kogie Govender

#### **COORDINATION TEAM**

Thomas Mtonsi Nozi Hamabaze Joe Sibiyia Caitlin Ransom

#### INSTITUTION

South African Environmental Observation Network



#### PARTNERS

- Nelson Mandela University
- Conservation Education Trust
- Shallow Marine Coastal Research Infrastructure
- South African Polar Research Infrastructure
- Department of Basic Education & Marine and Coastal Educators Network (MCEN)

#### **CONTACT AND LINKS**

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SOUTH **AFRICA** 

### 12 SCHOOLS



STUDENTS



**TEACHERS** 



PARTNERS

### **BLUE SCHOOLS IN SOUTH AFRICA**

Through the Blue Schools South Africa, students are provided with opportunities to think creatively about ocean sciences and citizenship for a sustainable world, regardless of their proximity to the coast. Online workshops have been held to develop learners' confidence, skills and resources, allowing them to engage in inquiries and challenges related to marine sciences.

"The program encourages critical thinking and experiential learning, with a focus on transforming knowledge into positive action to ensure a healthy future for the ocean."

The Blue School Program, launched in October 2021 by the South African Environmental Observation Network (SAE-ON) and funded by the Department of Science and Innovation in South Africa, aims to increase Ocean Literacy among learners and encourage problem-solving skills through the design of research projects. The Program has been welcomed and implemented in schools across the country.

The success of the Program has been particularly rewarding for inland learners, who may not have had the opportunity to experience the ocean before. Going forward, there are plans to develop materials that will optimize the program's educational value for a virtual space, allowing more learners to benefit from the program.

Expanding the network of beneficiaries is a key goal, and this will involve engaging with a diverse range of partners and organizations to positively influence educators and curriculum development in Blue Schools. Community engagement is also a priority, with a focus on incorporating local knowledge and enhancing the program's powerful platform for Ocean Literacy.



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# NAMIBIA

#### NATIONAL LANGUAGES

English

#### POPULATION

2,662,343 inhabitants

#### TERRITORY

824,292 km<sup>2</sup>

#### **CURIOSITY**

The world's largest ship cemetery is found in Namibia's Skeleton Coast, a 40 km wide and 500 km long coastal stretch where the cold and unpredictable Benguela Current of the Atlantic Ocean clashes with the dune and desert landscape of North-Western Namibia. It is a hostile but fascinating coast stretch, which the CNN News Network describes as probably as close as our planet gets to the mythical "end of the Earth"

#### NATIONAL COORDINATOR

Harold Efraim //Guiob

#### INSTITUTION

BlueGrowth Namibia Learning Centre

#### CONTACT

bluegrowth.namibia1@gmail.com



#### PARTNERS

- Africa Institutional Management Services (AIMS)
- Kelp Blue
- Hentiesbay Municipality



January 2023

### NAMIBIA 5 SCHOOLS 93 STUDENTS 11 TEACHERS 6 PARTNERS (By January 2023)



### BLUE SCHOOLS IN NAMIBIA

The development of a blue curriculum for schools in Namibia is reshaping the community's relationship with the ocean. In addition to being seen as a provider of food and recreation, the ocean is also considered an important resource for the health of the planet. This understanding drives dialogues with young students, inspiring the creation of the next generation of ocean stewards.

The Namibian chapter of the All-Atlantic Blue School Network began in 2021. The program has grown with Ocean Literacy and awareness efforts, nurturing Namibia in its international, regional, and national sustainability commitments. Investment in education has been supporting the achievement of the Sustainable Development Goals, especially 14, the Commonwealth Blue Charter, the African Union Blue Economy Strategy Agenda 2063, the African Development Community Blue Economy Strategy, the Belem and Galway Statements, Namibia's own aspirations under its Sustainable Blue Economy Policy Framework and Namibia's international pledges at the UN conferences on the Sustainable Blue Economy.

Joining forces with the University of Namibia, the Ministry of Fisheries and Marine Resources and the Benguela Current Commission, the Blue Schools Namibia covers 3 regions of the country: the Erongo, //Karas and /Khomas regions. The only non-coastal school involved in the Network is Hage Geingob High School in the capital, Windhoek, which initially started with the Blue Economy School Club.

"We are all connected to the ocean. And so, when we empower the hinterland with Ocean Literacy, we have already won half of the battle in our efforts to protect the coastal ecosystems."

The Blue Schools Namibia dreams of providing the most inclusive experience possible for all students. Extending activities to non-coastal schools and also covering private, open-learning, technical-professional, and special schools is a challenge welcomed with hope and enthusiasm. Partnerships with ocean stakeholders from all sectors will root the program's intentions in an interdisciplinary approach, collect funding, and help regional coordinators and All-Atlantic Ocean Youth Ambassadors ensure that the Network's objectives are carried forward into the future.



# IRELAND

#### NATIONAL LANGUAGES

Irish and English

#### POPULATION

5,083,289 inhabitants

#### TERRITORY

70,273 km<sup>2</sup>

#### **CURIOSITY**

Ireland's territory is made up of approximately 880,000 km<sup>2</sup> of land under the Ocean, which surrounds the Island of Ireland, and more than 25 small offshore Islands. This marine territory accounts for roughly 90% of Ireland's landmass. It stretches from the coastal zones and continental shelf, to the Porcupine Abyssal Plain, reaching a depth of over 4500m.

#### NATIONAL COORDINATOR

Noirin Burke

#### INSTITUTION

Galway Atlantaquaria

#### PARTNER

Irish Ocean Literacy Network

#### **CONTACT AND LINKS**

noirin@nationalaquarium.ie irishoceanliteracy.ie/blue-schools



SCHOOL





**TEACHERS** 



(By January 2023)

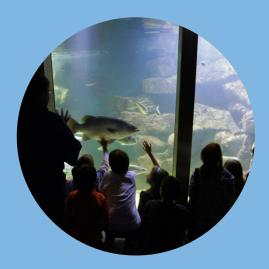
# BLUE SCHOOLS IN IRELAND

Ireland's schools are passionate about the ocean and the connections with the Atlantic community. Many educators and institutions across the country are already exploring marine activities and their relationship with the sea. With a vibrant atmosphere and growing enthusiasm, the Blue School concept has the potential to build on these journeys and bring further value.

The All-Atlantic Blue Schools program provides an exciting opportunity for Ireland to build upon local experiences and join a wider community. Both students and teachers are eager to discover the potential of being part of an Atlantic network.

"This platform not only connects schools with ocean-related topics and activities, but also fosters cross-cultural exchanges and shared adventures."

The Blue School Program coordination in Ireland is excited to expand and secure financial support to assist and recognize professionals and schools that participate in this program. The involvement of other stakeholders in the educational sector and policymakers is necessary to envision a great future for implementing Blue Schools in the country. There are many opportunities in Ireland to celebrate schools and students of all types and ages, establish connections with other Blue Schools around the world, and recognize schools' achievements in contributing to the Atlantic community.





## UNITED KINGDOM

#### **NATIONAL LANGUAGES**

English Welsh Irish Gaelic Scots Gaelic

#### POPULATION

68,827,285 inhabitants

TERRITORY

209,331 km<sup>2</sup>

#### NATIONAL COORDINATOR

Liz Morris Webb

#### **COORDINATION TEAM**

Stuart Jenkins

#### INSTITUTION

School of Ocean Sciences, Bangor University

#### PARTNERS

- Bangor University
- The Shark Trust

#### CONTACT

L.Morris-Webb@Bangor.ac.uk



470 STUDENTS



TEACHERS



PARTNERS

(By January 2023)



## BLUE SCHOOLS IN THE UK

In the UK, the All-Atlantic Blue Schools Network serves as a platform for developing global citizenship by increasing Ocean Literacy among children and teachers. By fostering a sense of community in the marine world, this initiative provides an opportunity to effect lasting behavior change.

The program targets primary schools in Wales, where there have being enthusiastic participation among children ages 9 to 11. However, the pandemic has posed a significant challenge to sustaining engagement with schools. It has been easier to involve small schools that are in need of educational resources, as larger schools tend to have more rigid legislation and activities planned far in advance.

"In the regional context, the UK has made significant strides in understanding what schools need and how Ocean Literacy can be embedded in policy." The UK also has an outstanding marine education network, which the Blue Schools program is engaging with. By joining forces and investing in partnerships, it may be possible to build on existing initiatives, recruit more schools, researchers, and marine educators, and secure funding in the face of scarce financial resources.

Finally, the Blue Schools Network offers a powerful opportunity to learn from and share experiences across different contexts, schools, countries, cultures, and partners. This shared knowledge can help build a network that is always evolving and thriving, paving the way for a brighter future for our oceans and our planet.

# MEXICO

#### **NATIONAL LANGUAGE**

Spanish

#### POPULATION

132,506,076 inhabitants

#### TERRITORY

1,973,000 km²

#### NATIONAL COORDINATOR

Irán Andira Guzman

#### **COORDINATION TEAM**

Dra. María Geovana León Pech Dra. María Julieta Maldonado Sanchez Ashley Yaneth Ibarra Pérez

#### INSTITUTION

Instituto de Ciencias del Mar y Limnología de la Universidad Nacional Autónoma de México

#### PARTNERS

- Takata experience
- Laboratorio de ecosistemas de arrecifes de la Universidad Veracruzana
- Laboratorio de ecología de ecosistemas de arrecifes coralinos del CINVESTAV
- Instituto Tecnológico de Chetumal
- Universidad Nacional Autónoma de México
- Universidad Autónoma del Carmen

#### **RESEARCH PARTNERS**

- Dra. María Geovana León Pech, TecNM
- Dra. María Julieta Maldonado Sanchez CINVESTAV
- Dra. Mariana Capparelli Vellosa ICMyL UNAM
- Dr. Enrique Ávila Torres ICMyL UNAM
- Dr. Omar Celis Hernández ICMyL UNAM
- Dra. María Amparo Rodríguez Santiago UNACAR
- Dra. Karina Esqueda Lara LANRESC
- Dr. Horacio Pérez España UV
- Dr. Jesús Ernesto Arias González CIN-VESTAV
- Dr. Armin Nazario Tuz Sulub UADY
- Dra. Diana Elizabeth Morales de Anda CINVESTAV
- M en C. Rodrigo Alfredo Nuñez Inzunza CINVESTAV
- Dra. Diana Cisneros de la Cruz CINVES-TAV
- Dra. Astrid Helena Huechacona Ruiz CINVESTAV
- Dr. Pedro Javier Escobar Turriza CIATEJ

# **MEXICO**

### 3 SCHOOLS

# 470

**STUDENTS** 



**TEACHERS** 



#### PARTNERS

(By January 2023)

#### **CONTACT AND LINKS**

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## BLUE SCHOOLS IN MEXICO

The All-Atlantic Blue Schools Network in Mexico offers a unique opportunity to connect children across the country and promote ocean education for the benefit of all. The growth of the Blue Schools offers a powerful tool for transforming citizenship and creating a better quality of life for the Mexican community. Working with schools is a solution-oriented approach that encourages creativity and helps to enrich the educational curriculum in Mexican schools. It is also an opportunity to process and expand the impact of the dissemination of scientific knowledge.

The Blue School program in Mexico started in 2022, embracing the challenge of engaging communities to participate in the network. Welcoming all school levels, near or far from the coast, has been requiring an inventive attitude to work in a diverse range of activities.

"Every action counts, and the program aims to inspire students and raise awareness of the importance of sustainable living. High school students in Mexico have had great acceptance of the program, as Ocean Literacy helps to reinforce these young people's commitment to sustainable living."

In its first phase of implementation, there were no financial resources to support the Blue Schools Network in Mexico. One of the solutions envisioned for the Mexican context was the creation of a Non-Governmental Organization to support the planning and implementation of the Blue Schools, as well as creating the necessary conditions for the development of a persistent and adaptive program.







# NIGERIA

#### **NATIONAL LANGUAGE**

English

#### POPULATION

219,641,919 inhabitants

#### TERRITORY

923,768 km<sup>2</sup>

#### NATIONAL COORDINATOR

Stephanie Waniko

#### **COORDINATION TEAM**

Dara Akinwusi

#### INSTITUTION

Nigerian Institute for Oceanography & Marine Research (NIOMR)

#### PARTNERS

- All Atlantic Ocean Sustainable Profitable and Resilient Aquaculture (ASTRAL)
- International Ocean Institute (IOI-Nigeria)
- Nigerian Institute of Transport Technology (NITT)
- Fisheries Society of Nigeria (FISON)
- Eco-Restoration Foundation Nigerian (ERF)
- Marine and Coastal Conservation Society of Nigeria (MCCSN)



27

SCHOOLS

**2700**STUDENTS

30





PARTNERS

(By January 2023)

#### **CONTACT AND LINKS**

infostephawo@gmail.com niomr.gov.ng

### BLUE SCHOOLS IN NIGERIA

The implementation of the Blue School program in Nigeria has captured the imagination of young minds, providing them with the tools to promote sustainable use of the ocean and activate their creativity.

"Communities and groups, including fishing and coastal communities, are increasingly becoming more informed about their relationship with the ocean and the need to protect it."

Students are actively involved in cleanup efforts, climate change action, and sharing their stories about ocean protection and sustainable use. More schools and communities are getting involved in Blue School activities and spreading information about ocean conservation.

Looking ahead, Nigerian schools envision a future where children, adults, and communities are educated about ocean issues and have the opportunity to make behavioral changes that support sustainability. The Blue School program has the potential to create a lasting impact on ocean conservation in Nigeria, inspiring the next generation of ocean stewards.





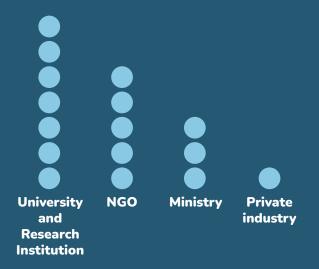


# **CLOSING REMARKS**

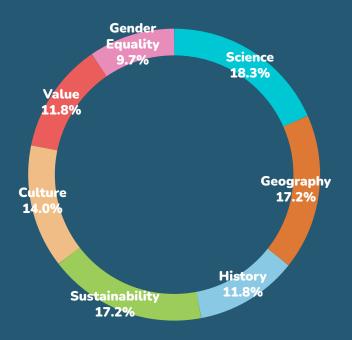
In October 2022, Santos | Brazil, the AA-BSN National Coordinators (NC) met in-person for the first time for a week to evaluate the program. The NC shared their experiences, worked together for an exchange of knowledge and experience, and discussed the next steps the AA-BSN should take.

At the time, there were 16 countries engaged in the AA-BSN and about half National Coordinators were affiliated to Universities and Research institutions (44%) (Figure 1). Although some countries have more people in their working team to implement their National Blue Schools Program, it was clear that most National Coordinators accumulated attributions, from planning and executing activities to teacher training, and from fundraising to program evaluation and outreach. The situation is even critical when it is considered that their National Blue School Program implementation is not their only attribution, and most of their dedicated hours to it is an in-kind contribution.

During the last two decades, the Ocean Literacy concept has evolved and a more holistic approach has been adapted by many, using the multi-perspective approach created by the UN for the Education for Sustainable Development. This vision allows a more inclusive approach where different geographies and cultural backgrounds can be considered, while the seven OL principles can still be addressed using the science perspective. The NC were asked if their National Blue Schools fit into any of the perspectives besides its seven principles, and we could see a balance among the answers (Figure 2). Yet, gender equality is slightly out, and may be an indication that the program should address it with more care.



**Figure 1.** Number of answers per affiliation representation of the AA-BSN National Coordinators by October 2022.



**Figure 2.** Percentage of the multiperspective dimensions explored by the AA-BSN acoording to the NC.

One of the most discussed issues during the workshop was the obstacles and challenges faced by each country to create their National Blue School Program. The lack of funding available to implement local actions and afford transport of students to a variety of activities, as well as the lack of time to dedicate to develop the project appeared as the main obstacles (Table 1).

BARRIER TO IMPLEMENT NATIONAL BLUE SCHOOLS	# ANSWERS
Lack of funds for the implementation of actions or transport	7
Lack of time to develop the project	7
Difficulty in involving schools in the program/project	6
Lack of support from school management	6
Lack of support from decision-making bodies – Ministry of Education or similar	5
Lack of curricular flexibility (which allows articulating initiatives with curricular pro- grams)	4
Lack of confidence and training to teach about the ocean	3
Physical distance to the ocean	3
Lack of interest in working on the ocean theme	2
Lack of interest on the part of students in studying and exploring the ocean theme	0
Lack of support from the Blue School coordination	0

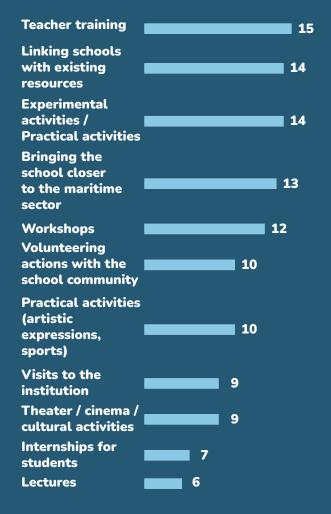
Table 1. Barriers to implement Blue Schools projects from the AA-BSN National Coordin	ators' point of view.
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**ESCOLA AZUL** 





From the NC's experience, teacher training is the most relevant activity that should be addressed for Blue Schools at the moment (Figure 3) to engage and give support to more teachers and schools to the program.



**Figure 3.** Number of answers related to what activities are most relevant for Blue School in the view of the AA-BSN National Coordinators.

Even so, the AA-BSN surpassed all the expected indicators, reaching an increase of more than 1000% on the planned number of students engaged (Table 2).

The second second second second and demoted by second systematically 2023.					
BARRIER TO IMPLEMENT NATIONAL BLUE SCHOOLS	EXPECTED OUTPUT	FINAL OUTPUT (JANUARY 2023)	INCREASE (%)		
Number of countries	5	16	320%		
Number of schools	400	455	113.8%		
Number of teachers	1,600	3,458	216.1%		
Number of students	12,000	125,178	1043.2%		
Number of stakeholders	-	189	-		

 Table 2. Measures and indicators expected and achieved by January 2023.

During the workshop, two surveys were validated to apply to teachers and stakeholders in order to evaluate their experience during the AA-BSN activities (from June 2021 to January 2023).

### **TEACHERS' SURVEY**

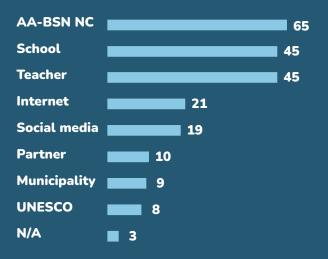
There were 224 answers from teachers to the survey. They represent 10 countries, working on schools located either in coastal (173) and inland areas (51), with students ranging from 10 to 20 years old, mostly with support from the school management/coordination (Table 3).



COUNTRY	#TEACHERS	# COASTAL SCHOOLS	#INLAND SCHOOL	SUPPORT FROM SCHOOL (%)
USA	3	3	0	66
Namibia	4	2	2	75
Argentina	60	33	27	93
Angola	4	4	0	100
Mexico	1	1	0	0
Brazil	25	13	12	88
Sao Tome and Principe	2	2	0	100
Portugal	113	106	7	96
Morocco	1	1	0	0
Nigeria	11	8	3	100
Total	224	173	51	93

#### Table 3. Measures and indicators expected and achieved by January 2023.

Most of the respondents learned about the All-Atlantic Blue School Program by some action done by the AA-BSN National Coordination, though indication by another school or teacher had a great weight concerning Blue School adhesion (Figure 4).



**Figure 4.** Number of answers when Blue School teachers were asked how they found out about the Blue School Program.

These teachers have worked on Ocean Literacy in a variety of disciplines, from traditional ones such as Natural Science and Geography, to Economics, Arts and Social Sciences (Figure 5), often exploring principles of Ocean Literacy related to biodiversity, climate, and human-ocean connection (Table 4). Moreover, under their perception, the Blue School project has influenced possible changes in attitudes, behaviors and knowledge towards the ocean, of students and other teachers (Table 5), with 96% of the teachers believing that the Blue School project increased their personal knowledge about the ocean.

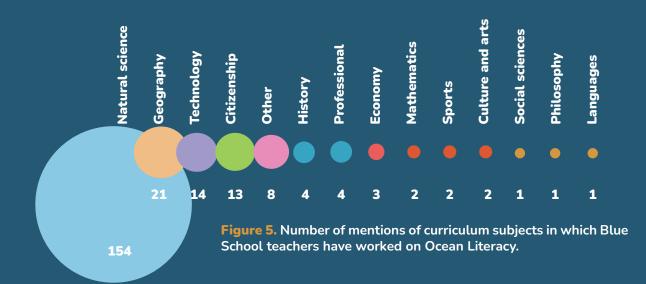


Table 4. Frequency of topic	s related to Ocean	Literacy Principles	explored by Blue	School teachers
(higher numbers highlighted	).			

TOPICS	NEVER (%)	RARELY (%)	SOME- TIMES (%)	OFTEN (%)	AL- WAYS (%)	I DON'T KNOW (%)
The ocean as a source of artistic inspi- ration or culture as a communication engine of the ocean	10.3	13.8	33.0	31.3	10.3	1.3
Ocean sustainability	2.2	2.2	16.1	41.5	37.1	0.9
Economy of the ocean	6.3	12.5	37.1	27.2	15.6	1.3
Gender equality at the ocean	23.7	29.0	25.0	9.8	8.0	4.5
The ocean in History	7.6	21.4	35.7	21.0	12.1	2.2
Explore the ocean using geography subjects and tools	7.6	22.3	25.0	26.3	17.0	1.8
The ocean is largely unexplored	4.5	11.6	25.0	33.5	22.3	3.1
The ocean makes the Earth habitable	1.8	7.1	18.8	37.9	31.7	2.7
The ocean supports a great diversity of life and ecosystems	0.4	4.5	12.1	35.7	42.9	4.5
The ocean and humans are inextricably interconnected	0.9	6.3	14.3	35.7	38.8	4.0
The ocean and life in the ocean shape the features of the Earth	2.7	6.3	19.2	36.2	33.0	2.7
The ocean is a major influence on weather and climate	3.6	4.9	20.1	32.1	37.1	2.2
The Earth has one big ocean with many features	4.9	8.9	22.8	32.1	27.7	3.6

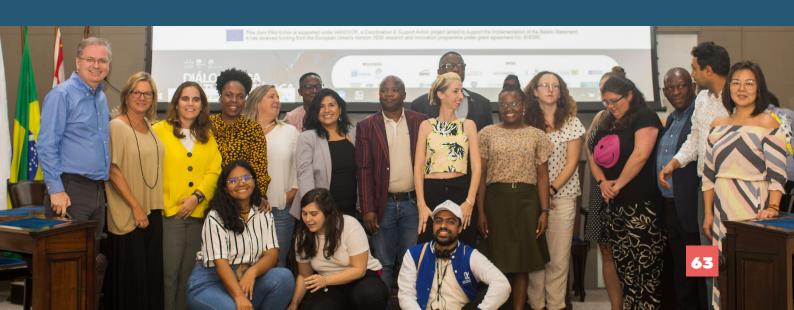
**Table 5.** Percentage of teachers' answers when asked about their perception if the Blue School influenced the attitudinal change and knowledge of students and teachers in the items listed (higher numbers highlighted).

	VERY INFLUENTIAL (%)			
	STUDENTS	TEACHERS	STUDENTS	TEACHERS
Greater interest and concern about problems related to the ocean	54.0	54.0	33.0	30.4
Greater empathy for the ocean	56.7	53.1	32.6	32.1
Learning information essential to behavior change	55.4	54.5	32.6	29.0
Awareness that we are all part of the problem and/or solution of issues related to the ocean	50.4	53.6	38.4	34.4
More reflection on our behaviors and their con- sequences for the sustainability of the ocean	50.0	54.9	37.1	30.8
A greater understanding of the impact our ac- tions have on the ocean	53.1	54.9	34.4	32.6
Changing our daily choices to contribute to the protection of the ocean	53.1	53.1	30.4	30.8
Changing habits	44.6	46.9	29.9	29.9
Greater willingness and interest in communicat- ing and debating about problems or solutions that we may have for the ocean in circles of friends or with family members	46.4	46.0	22.8	28.1
Interest in sharing knowledge with others	46.9	50.4	28.1	26.8
Willingness and interest in debating issues re- lated to the ocean at a group or community level	46.4	46.9	19.6	26.8
Mobilization of participants in community aware- ness initiatives	46.4	46.0	20.1	25.4
Participation in citizenship actions and finding applicable solutions for solving real problems	42.4	46.0	25.0	27.2
Learning on matters related to the ocean	50.4	48.7	31.7	33.0
Provide relevant information	54.0	47.8	26.3	31.3

When teachers were asked about difficulties they faced during Blue School implementation, the first barrier they faced was the lack of funds to develop activities. The second was the difficulty of involving other teachers to engage in the school project and lack of time to dedicate themselves to it (Table 6). Nevertheless, all teachers consider the Blue School project relevant to their school in the future and would recommend it to other teachers and schools.

BARRIER TO IMPLEMENT BLUE SCHOOLS	#ANSWERS
Lack of funds for the implementation of actions or transport.	132
Difficulty in involving colleagues in the program/project.	97
Lack of time to develop the project.	69
Physical distance to the ocean.	41
Lack of lead time for the programme (i.e.: we plan our activities a year in advance).	14
Lack of curricular flexibility (which allows articulating initiatives with curricular pro- grams).	12
Lack of support from decision-making stakeholders – Ministry of Education or similar.	6
N/A	6
None	2
Lack of support from school management.	2
Lack of support from the Blue School coordination.	2
Lack of interest on the part of students in studying and exploring the ocean theme.	1
Lack of confidence and training to teach about the ocean.	1
Lack of interest in working on the ocean theme.	1
The permission for the image sample in photos and videos was a present and frustrat- ing obstacle to me as a coordinator	1
Connectivity problems	1
A barriers to implement the Blue School program at the Hospital-domiciliary School is the health status of our students	1
Dense curricular contents	1

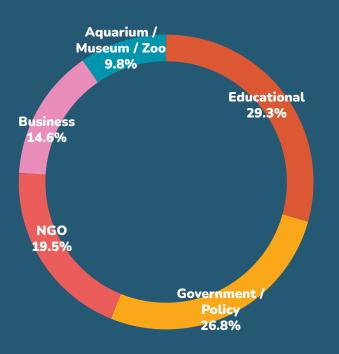
 Table 6. Barriers to implement Blue Schools projects from the teacher's point of view.



### STAKEHOLDERS

By January 2023, 41 stakeholders from 6 countries (Portugal, Angola, Nigeria, South Africa, Mexico and Argentina) had answered the survey.

Most of the results were from stakeholders related to the educational area (Figure 6), also with answers from government representatives, NGOs, business sector and Aquarium/Museums sector. Most of the activities they developed with Blue Schools were lectures, visits to the stakeholders institution, and experimental learning offers, although a range of other activities from teacher training to artistic activities were also mentioned (Table 7).



**Figure 6.** Percentage of different stakeholders sectors that answered the survey.

 Table 7. Numbers of answers concerning what

 type of activity stakeholders carried out with

 the Blue School.

WHAT ACTIVITIES DID YOU CARRY OUT WITH THE BLUE SCHOOLS?	#ANSWERS
Lectures	21
Visits to the institution	20
Experimental learning (field visits, experiments, or practical activities)	15
Workshops	13
Volunteering actions with the school community (e.g. cleanup action, biodiversity protection)	12
Providing your own OL educa- tional resources	11
Pre-service teacher training	9
Practical activities (artistic expressions, sports) in the classroom	6
Internships for students	2
Theater/cinema/cultural activ- ities	2
Qualified teacher training	1
Creation of an extracurricular club	1
Tutoring	1
I do not know how to answer	1

When considering the challenges to implement Blue Schools, stakeholders, as well as the AA-BSN National Coordinators, indicated lack of funding to implement activities as the main problem (Table 8). Accordingly, the difficulty for schools to travel to activity sites or insti-

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tutions came in second place as an obstacle, and for teachers and AA-BSN National Coordinators, it came in first place. These results suggest that funding may unlock this obstacle and boost more partnerships and a bigger number of schools and students engaged in Ocean Literacy.

The fourth most voted on the list of barriers to implement Blue Schools projects was the insufficient lead time for schools to get involved, and it appeared on the teachers' list as well (Table 8). Schools calendars seem to run differently when compared to stakeholder's calendars, such as NGOs, governmental bodies and business. Furthermore, if we consider the Atlantic reality, with countries from both hemispheres, each with a specific school calendar, matching all school calendars may be very complex. However, this might be seen as an opportunity to start one global event, a date, or a period of time, when all Atlantic Blue Schools and their stakeholders come together for a single call to action to begin a ripple that may turn bigger each year. The continuity of the project will facilitate the lead time many schools need to be part of networks as the AA-BSN.

OBSTACLES FACED	#ANSWERS
Lack of funding to implement activities	22
Difficulty for schools to travel to the activity site or institution	17
Lack of human resources/time of the institution	13
Insufficient lead time for schools to get involved (your timescales did not match school planning timescale)	12
Lack of contact (interest) on the part of teachers	9
Insufficient preparation/background of students for the activity	4
Resistance of families to children's participation in certain activities (sports and out- door activities)	4
No obstacle	4
(Dis)Interest/relevance on the part of students	1
Not enough flexibility for schools to develop activities coherently and with a fixed duration	1
Non-articulation between the activities proposed and the curriculum learning goals	0

 Table 8. Barriers to implement Blue Schools projects from stakeholder's point of view.

### FOR THE FUTURE...

Firstly, it is believed that representatives of other entities are needed to be part of the AA-BSN to coordinate a permanent Blue School Network, such as from educational centers, communication, ministries other than related to science and environment, local government, teachers and teachers' trainers, marine community, and the private sector, to strengthen the network in areas uncovered and bring diversity into the network.

Secondly, secured and sustainable funding is important and necessary, both to run National Blue School coordination as well as to support Blue Schools to develop their activities.

Foremost, ministerial recognition, specially related to formal education, is mandatory to give accountability and space for Ocean Literacy to be incorporated as a public policy and into the national curricula.

Moreover, there is great potential for Blue Schools to go global in the near future as other non-Atlantic countries are looking at the AA-BSN interested in implementing the program, as there are other networks in non-Atlantic countries working Ocean Literacy with schools. Hence regional or continental coordinations are needed to connect the initiatives at a global scale, each keeping and valuing its local, national, regional, continental characteristics; also, a global Blue School brand is important to get the Blue School as a permanent and common action in all countries.





### CEAN IERACY ALOGUES



### FOR A BLUER FUTURE

### **AA-BSN COCOORDINATORS' FINAL MESSAGE**

The journey of building and initially implementing the All-Atlantic Blue Schools Network has been successful and a great learning experience. We overcame geographic, cultural, and economic barriers and showed that together we can engage society, the different public, private, and educational sectors (formal and non-formal education), in each country—regardless of its size, population, network—to promote Ocean Literacy and the Generation Ocean.

Incredible examples of how each nation and each school understand its relationship with the ocean were being built and shared. Among countries, a unique exchange emerged, a possibility of experiences, visions, and common citizenship initiatives. Students, teachers, network of educators, and all sectors involved learned from each other and from their realities. The ocean unites us. It brings us together, but we have many differences and challenges as a society that need to be addressed. What unites us and what still sets us apart, and how to transform in a pathway for building a global community.

How can we build and look toward a better, more sustainable future that brings diversity, equity, and inclusion? We must work towards a sustainable, inclusive, and equitable ocean within the All-Atlantic community.

Different initiatives, networks and movements for a healthy, sustainable, diverse, and inclusive ocean have taken greater proportions from 2017, with the announcement of the UN Decade of Ocean Science for Sustainable Development, which had its implementation started in 2021. In recent years, we have had movements that added up and drove this process globally.

In 2017, the Blue School concept started its implementation in <u>Portugal</u>. In 2021 the <u>All-Atlantic Blue Schools Network</u> started—at the same time as the <u>UNES-</u> <u>CO Ocean Literacy with All Program</u>. In November 2021, as a result of a FAPESP Public Policy Program in partnership with the British Council carried out in 2020 (Brazil), we had the first public policy to include Ocean Literacy in the school curriculum in the city of Santos in Brazil—an example of science for policymaking that shows the integration of the Blue School movement with science-based Ocean Decade movements.

Also in 2021, the Canadian Ocean Literacy Coalition (COLC), together with the Marine Social Sciences Network (Mar-SocSci), Cardiff University, and the University of Plymouth, co-led the development of the <u>Global Ocean Literacy</u> <u>Research Community</u> (OLRC) initiative. Priorities and gaps in Ocean Literacy research were co-identified through a series of workshops with over 130 participating researchers globally. Co-designed action research and collaborative solutions are helping to scientifically support public policies.

In 2022, the document <u>A New Blue Cur-</u> riculum: a toolkit for policy-makers was launched by IOC-UNESCO, to drive public policies in favor of Ocean Literacy in the educational sector.

While our All-Atlantic Blue Schools Network schools developed its activities in 2022, the network participated in international events to give voice to students from different Atlantic countries talking on global issues: the <u>All-Atlantic Forum</u>, the <u>UN Ocean Conference</u>, the <u>Ocean</u> <u>Literacy Dialogues</u>, and projects like <u>AtlantECO</u>, <u>UNESCO Campus</u> and others. Also, in October 2022, we held the first in-person AA-BSN week-long workshop and meetings to evaluate the project and exchange experiences and learnings.

The All-Atlantic Blue School Network promotes diversity and inclusion, under-

stands the ocean through with different perspectives, and addresses topics like sustainable economics, marine spatial planning, aquaculture, ocean and climate nexus, pollution and so many others, bearing in mind that taking action and changing behaviours are the ultimate objectives. Blue School network contributes to the Ocean Decade targets. It is built with all, for all, based on all systems of knowledge.

We look forward to this future, a future where the lessons learned from the All-Atlantic Blue School Network can strengthen the network with more resources, expanding diversity, equity, inclusion, and learnings for a sustainable ocean.We hope to get in a few years an ocean literate Atlantic community, citizens capable of act, decide and communicate individually and together about the ocean in a meaninfull way.

At the same time, along with other movements and side-by-side with the Ocean Decade and a new phase of <u>AAORIA</u>, we want to create synergies and joint actions with other Blue Schools networks and other OL networks around the world.

> Together, for a bluer future. Guadalupe, Raquel, and Ronaldo

Access the AA-BSN page at the AAORIA's website to get to know all the AA-BSN products allatlanticocean.org/all-atlantic-joint-actions/all-atlantic-blueschools-network/

### 2017

Announcement of the <u>UN Decade of Ocean</u> <u>Science for Sustainable Development</u>

The **Blue School concept** started its implementation in **Portugal** 



Beginning of the implementation of the UN Decade of Ocean Science for Sustainable Development

Launch of the UNESCO Ocean Literacy with All Program

First public policy to include Ocean Literacy in the school curriculum in the city of Santos in Brazil

Development of the <u>Global Ocean</u> Literacy Research Community (OLRC)



Lauching of the document <u>A New Blue Curriculum: a toolkit for</u> <u>policy-makers</u>

All-Atlantic Forum

#### **UN Ocean Conference**

Ocean Literacy Dialogues

First in-person AA-BSN week-long workshop

Participation on <u>AtlantECO</u> and <u>UNESCO Campus</u>

### OCEAN LITERACY RESOURCES



Ocean Literacy for All: a toolkit



Ocean Literacy Research Community (OLRC)



All-Atlantic Talks | Blue Schools

A new blue curriculum: a toolkit for policy-makers



All-Atlantic Ocean Youth Ambassadors | Booklet series Bridging the Ocean (English, Spanish, Portuguese and French)



UNESCO Campus special edition



All-Atlantic Forum: priority areas I In the voice of the Blue Schools' students



UN Ocean Conference | In the voice of the Blue Schools' stu-



First in-presence AA-BSN meeting during the Ocean Literacy Dialogues event in Santos, Brazil



Booklet AtlantECO in partnership with the AA-BSN



All-Atlantic Blue Schools' website (available in English, Spanish, and Portuguese)



Ocean Literacy Portal (only in English)



<u>Escola Azul Portugal</u> (only in Portuguese)



Maré de Ciência (only in Portuguese)



World Ocean Day (only in English)



<u>The Ocean Race</u> (available in many languages)

# **BLUE SCHOOLS**

### PORTUGAL

EB de Campo de Besteiros EB1/JI de Sesimbra EB de Alfarim EB/JI de Azoia EB/JI de Aldeia do Meco Externato Rainha D<sup>a</sup> Amelia EB 2/3 João da Rosa EB1/JI Cavalinha EB1/JI nº.6 de Olhão Colégio Pedro Arrupe EB Estádio do Mar ES de Santa Maria Maior EB 2/3 Frei Bartolomeu dos Mártires EBS Anselmo de Andrade EB/JI Feliciano Oleiro EB/JI n° 1 do Praga EB da Gafanha da Encarnação CED Nossa Senhora da Conceição EB1/2/3/JI de S. Sebastião EB1/JI de Porto Judeu EB 2/3 do Caniço EB da Gafanha da Nazaré ES da Gafanha da Nazaré ES Luís de Freitas Branco

EB Maria Luciana Seruca EB Dionísio dos Santos Matias EB Anselmo de Oliveira ES António Gedeão EB Comandante Conceição e Silva EB n° 3 do Laranjeiro EB/PE do Caniço ES Leal da Câmara EB Padre Alberto Neto EB nº 1 de Rio de Mouro EB D. Pedro EB/JI de São Paio EB Vallis Longus EBS À Beira Douro EB de Chães EB Bairro Afonso Costa EB Humberto Delgado EB Montinho da Cotovia EB Alto Guerra EB Pinheirinhos EB de Gâmbia EB Monte Belo ES Diogo Macedo EB do Olival

JI de Gestosa JI de Gondesende JI de Paincais JI de Sá JI de Seixo Alvo JI Urbano dos Santos Moura Colégio de Nossa Senhora da Bonança EB/JI de Prageira EBI da Quinta do Conde EB de Mindelo EB do Facho EB n.º 1 da Bobadela EB n.º 3 da Bobadela EBS Amadeu Gaudêncio ES Peniche EB 2/3 Dr° Horácio Bento de Gouveia EB 2/3 de Aranguez EB n°1 das Areias EB/JI da Azeda EB N°8, Bairro da Conceição

ES Inês de Castro Creche e JI de S. Lázaro ES de Palmela EB 2/3 e S Ordem de Sant'lago EB 2/3 Dr. Alberto Íria EB 1/JI n. 1 de Olhão EB da Ilha da Culatra Externato Cooperativo da Benedita EB Caxinas EBI/ JI de Santo Onofre EB da Foz do Arelho CED D. Maria Pia ES Gil Eanes EB das Naus Externato de Penafirme JI da Luz de Tavira EB1 Santa Luzia EB1 Luz Tavira EB1 Santa Catarina JI/EB D. Manuel I JI Eco – Tavira EBS de Vialonga EB 2/3e S de Viatodos JI Dr. João Santos

EB de S. Silvestre, Gradil EB/S Professor Armando de Lucena JI do Gradil ES de Vagos Centro Escolar da Boa Hora EB1 da Quintã EB1 de Calvão EB1 de Ouca EB1 de Sosa EB1 de Salqueiro EB 2/3 Álvaro Velho EB n°1 do Lavradio EB N°2 do Lavradio EB dos Fidalguinhos EB do Barrocal EB da Conceição ES Camilo Castelo Branco EB Ria Formosa Centro Social da Trafaria EB1/PE Visconde Cacongo

EB1/PE e Creche da Nazaré EB1/PE/C do Caniçal EB1/PE/C de São Jorge EBS Dr Ângelo Augusto da Silva ES de Camilo Castelo Branco JI/EB1 Antero Basalisa EB1/2 Vieira da Silva EB do Carmo EB Alto de Rodes ES de Francisco Franco EBS da Ponta do Sol Externato São Francisco de Sales EB 1/2/3 Padre Bartolomeu Perestrelo EBS Padre Manuel Álvares, Ribeira Brava EB 2/3 da Torre EB1/PE da Assomada EB 1/JI Manuel Coco JI de Capela JI de Valadares JI de Vila Chã EBS Tomás de Borba, Açores EB1 de Fraião Escola do Desterro Escola de Nova do 1º ciclo Escola de Sininhos do 1º ciclo EB 2/3 de Marinhais

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EB de Tires EB1 PE Rancho e Caldeira EB3 Peniche EB Peniche EBS do Levante da Maia Externato Florinda Leal Escola de Hotelaria e Turismo de Portimão EB 2/3 de Santo António EB do Mosteiro EB com PE e Creche dos Louros EB1 S. Gonçalo Externato Santa Joana EB1 de Leirosa JI da Leirosa EBS D. Martinho Vaz de Castelo Branco EB1/JI1 da Maia EB1/JI da Maia EB1/JI de Currais EB1/JI D. Manuel EB/JI dos Arcos EB N°2 de Setúbal, Santa Maria EB/JI de São Gabriel EB1/JI Rosário EB1/JI Santa Clara a Nova LATI - Centro Comunitário do Bocage EBS Lima de Freitas

CED D. Nuno Álvares Pereira Externato da Quintinha E.B. 2/3 José Cardoso Pires EB Cruz da Picada EB1 nº1 de Lagos (Bairro Operário) Colégio de Alfragide EBS\Pe da Calheta EB1 PE Fajã da Ovelha EB1 PE Fajã da Ovelha EB1 PE Paul do Mar EBS Dona Lucinda Andrade EB1/PE Tabua ES Jaime Moniz Escola Portuguesa de Moçambique

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### ANGOLA

Complexo Escolar nº 37M Anexa ao Magistério do Namibe Complexo Escolar Marítimo Helder Neto Centro Infantil Diamante

### SAO TOME AND PRINCIPE

Escola Praia-rei da Roça de Água-Izé

### MOROCCO

University of Chouaib Doukkali French International School Jean Charcot in El Ja dida Groupe Scolaire Ouled Zid Ecole Melrose

### NAMIBIA

Kamwandi Combined School Hage Geingob High School Luderitz Blue School



Scoil Réalt na Mara

**MEXICO** 

CETMAR 08, Mazatlán, Sinaloa CETMAR 29, Ciudad del Carmen, Campeche Preparatoria Morelos Lizardi, Ciudad del Carmen, Campeche















